

### **REMARKS**

In the Office Action mailed October 18, 2007, claims 1-3, 8, 10-15, 20, 22-27, 32, 34-36, 39, and 40 were pending for consideration, and claims 37 and 38 were withdrawn as a result of a restriction requirement. The Examiner has rejected claims 1-3, 8, 10-15, 20, 22-27, 32, 34-36, 39, and 40 under 35 U.S.C. 103(a) as being allegedly obvious over U.S. Patent No. 5,626,611 (hereinafter "Liu"). Claims 1-3, 8, 10-12, and 25-36 have been canceled. Claims 13 and 39 have been amended. Support for these amendments can be found, *inter alia*, on page 4, lines 15-27 of the specification as originally filed. The Applicants stress that these amendments and cancellations have been made in an effort to advance the prosecution of the present application, and as such, should not be seen as agreement with the positions taken by the Examiner. The Applicants reserve the right to pursue any canceled or otherwise withdrawn subject matter in future applications. Additionally, Applicants hereby declare that the amendments made herein do not include any new matter. Claims 13-15, 20, 22-24, 39, and 40 remain pending for consideration in the present application, and Applicants respectfully submit that these claims are in condition for allowance. Additionally, the Examiner is invited to review the prosecution of the related parent case, Application No. 10/218,336 filed on August 13<sup>th</sup>, 2002, now issued as U.S. Patent No. 7,070,610.

#### **35 U.S.C. § 103(a) Rejections:**

The Examiner has rejected claims 1-3, 8, 10-15, 20, 22-27, 32, 34-36, 39, and 40 under 35 U.S.C. 103(a) as being allegedly obvious over Liu, and of these, claims 13-15, 20, 22-24, 39, and 40 remain pending for consideration. While the Applicant is confident

that the Examiner is well acquainted with the requirements necessary to establish a *prima facie* case of obviousness, it is thought prudent to briefly review the required elements. Specifically, in order to meet the burden of establishing a *prima facie* case of obvious, the Patent Office must show that: 1) each and every element of the invention as set forth in the claims is taught or suggested by the reference as modified or the combination of references; 2) that there is sufficient motivation or articulated reasoning for one of ordinary skill in the art to modify or combine the reference; and 3) that one of ordinary skill in the art would find a sufficient likelihood of successfully making the modification or combination asserted. Applicants respectfully submit that the Patent Office has failed to satisfy these requirements with any of the asserted rejections, and thus has not established a *prima facie* case of obviousness. It is thus the Applicants' assertion that the teachings of Liu alone or as modified as suggested by the Examiner would not render obvious independent claim 13 of the present application.

Liu teaches co-extruding a core polymer and a shell polymer to form a core/sheath type suture. In one embodiment, the core may be of absorbable polymers, copolymers, or mixtures fabricated from a laundry list of glycolide, glycolic acid, lactide, lactic acid, caprolactone, dioxanone, trimethylene carbonate, and dimethyl trimethylene carbonate. The shell may be of bioabsorbable polymers made from a laundry list of glycolide, glycolic acid, lactide, lactic acid, caprolactone, dioxanone, trimethylene carbonate, and dimethyl trimethylene carbonate. (col. 3, line 38 to col. 4, line 20).

The claim 13 of the present application contain limitations to, *inter alia*, a monofilament suture comprising a co-extruded sea/island type suture including a first absorbable polymer and a second absorbable polymer, where the second absorbable

polymer has a Young's modulus that is lower than the Young's modulus of the first polymer, and wherein the first polymer is the sea component and the second polymer is the island component. Furthermore, the Young's modulus of the first polymer and the second polymer is 3.0 GPa or less, and the difference of the Young's modulus between the first polymer and the second polymer is 0.3 GPa or more. The second polymer is a copolymer comprising dioxanone, trimethylene carbonate, and caprolactone, and the first polymer is a homopolymer or a copolymer synthesized from dioxanone monomers.

Sea/island type sutures exhibit improved knot security and flexibility and respond very differently as compared to core/sheath type sutures. For example, upon knot tying, the cross-sectional deformation is very different for the sea/island as compared to the core/sheath. As the knot is tied, the islands tend to move within the sea relative to one another as the monofilament is compressed, as compared to the core that can only compress along with the sheath. These very different cross sectional movements result in very different knot tying characteristics. Similarly, flexibility is very different between the two suture types. Flexibility is related to bending rigidity, or in other words, resistance to bending forces. The resistance to bending forces would be very different between the two suture types because of the ability of the islands to move relative to one another in the sea as the suture is bent. Thus the strength of the suture is maintained while increasing flexibility because the cross sectional area of the islands can be the same as the cross sectional area of the core, thus preserving strength, while the increase in flexibility is a result of the relative movement of the islands within the sea during bending.

The Patent Office has not established a *prima facie* case of obviousness because the Liu reference, either alone or modified as suggested by the Patent Office, does not teach or suggest each and every element of claim 13. Specifically, Liu does not teach or suggest a sea/island type suture having a plurality of islands. It would also not have been obvious to one of ordinary skill in the art at the time the application was filed to modify Liu to arrive at the present claims. Liu teaches a suture having a shell and a cylindrical core portion, as is clear from col. 2 line 49 to col. 3 line 10, and FIGs. 1 and 2.

Accordingly, Liu alone or as modified does not teach each and every element of the amended independent claims. As such, withdrawal of the rejection of claim 13 is respectfully requested. Additionally, claims 14, 15, 20, 22-24, 39, and 40 depend from independent claim 13 and are considered to be narrower in scope. Withdrawal of the rejections of these claims is also respectfully requested.

### CONCLUSION

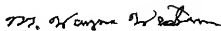
In view of the foregoing, the Applicants assert that claims 13-15, 20, 22-24, 39, and 40 of the present application present allowable subject matter and the allowance thereof are requested. If any impediment to the allowance of these claims remains after consideration of the present amendment and above remarks, and such impediment could be removed during a telephone interview, the Examiner is invited to telephone Dr. Todd Alder, or in his absence, Mr. M. Wayne Western, so that such issues may be resolved as expeditiously as possible.

Please charge any additional fees except for Issue Fee or credit any overpayment to Deposit Account No. 20-0100.

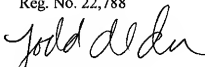
Dated this 18<sup>th</sup> day of December, 2007.

Respectfully submitted,

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